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EUROPEAN PATENT APPLICATION

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(54) Recombinant antibodies for human therapy

(57) A recombinant antibody comprising a human,  
a chimpanzee or a first Old World monkey immunoglobulin  
constant region and an antigen-binding portion of a  
second Old World monkey immunoglobulin variable re-

gion, wherein said first and second Old World monkey  
can be the same or different.



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## EUROPEAN SEARCH REPORT

Application Number  
EP 02 01 2106

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.)
X	TRUNEH ET AL: "HUMORAL RESPONSE OF CYNOMOLGUS MACAQUES TO HUMAN SOLUBLE CD4:ANTIBODY REACTIVITY RESTRICTED TO XENO-HUMAN DETERMINANTS" CELLULAR IMMUNOLOGY, vol. 131, no. 1, pages 98-108, XP008009974 * page 98, abstract *	19-22, 48, 49	C12N15/13 C07K16/00 A61K39/395
X	VAN MEURS ET AL: "PRODUCTION OF PRIMATE MONOCLONAL ANTIBODIES" JOURNAL OF IMMUNOLOGICAL METHODS, vol. 95, pages 123-128, XP001109105 * the whole document *	19-21, 48, 49	
A	SCHROEDER ET AL: "EARLY RESTRICTION OF THE HUMAN ANTIBODY REPERTOIRE" SCIENCE, vol. 238, 6 November 1987 (1987-11-06), pages 791-793, XP008009967 * figure 1 *	50	
A	COMBRIATO ET AL: "V LAMBDA AND J LAMBDA-C LAMBDA GENE SEGMENTS OF THE HUMAN IMMUNOGLOBULIN LAMBDA LIGHT CHAIN LOCUS ARE SEPARATED BY 14 KB AND REARRANGE BY A DELETION MECHANISM" EUROPEAN JOURNAL OF IMMUNOLOGY, vol. 21, pages 1513-1522, XP002082650 * figure 3 *	50	C07K  TECHNICAL FIELDS SEARCHED (Int.Cl.)
		-/-	
<p>The present search report has been drawn up for all claims</p>			
Place of search THE HAGUE	Date of completion of the search 11 November 2002	Examiner Sitch, W	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date O : document cited in the application L : document cited for other reasons 8 : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.)						
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A	HUGHES-JONES ET AL: "NUCLEOTIDE SEQUENCES AND THREE-DIMENSIONAL MODELLING OF THE VH AND VL DOMAINS OF TWO HUMAN MONOCLONAL ANTIBODIES SPECIFIC FOR THE D ANTIGEN OF THE HUMAN RH-BLOOD-GROUP SYSTEM" THE BIOCHEMICAL JOURNAL, vol. 268, no. 1, 15 May 1990 (1990-05-15), pages 135-140, XP008009968 * figures 1,3 *	50							
P,X	STEPHENS ET AL: "ANTIBODIES ARE PRODUCED TO THE VARIABLE REGIONS OF THE EXTERNAL ENVELOPE GLYCOPROTEIN OF HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 IN CHIMPANZEES INFECTED WITH THE VIRUS AND BABOONS IMMUNIZED WITH A CANDIDATE RECOMBINANT VACCINE" THE JOURNAL OF GENERAL VIROLOGY, vol. 73, no. 5, pages 1099-1106, XP001109104 * page 1099,abstract *	19-21, 48,49							
E	EP 0 523 949 A (THE WELLCOME FOUNDATION LIMITED) 20 January 1993 (1993-01-20)  * page 2, line 51 - page 3, line 27 * * page 3, line 54 - page 4, line 22 * * page 6, line 4 - line 17 * * page 7, line 51 - page 8, line 48 * * example 2 * * claims 1-30 *	1-10, 13-21, 23-27, 44-46, 48,49	TECHNICAL FIELDS SEARCHED (Int.Cl.)						
<p>The present search report has been drawn up for all claims</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Place of search</td> <td style="width: 33%;">Date of completion of the search</td> <td style="width: 33%;">Examiner</td> </tr> <tr> <td>THE HAGUE</td> <td>11 November 2002</td> <td>Sitch, W</td> </tr> </table>				Place of search	Date of completion of the search	Examiner	THE HAGUE	11 November 2002	Sitch, W
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## EUROPEAN SEARCH REPORT

Application Number  
EP 02 01 2106

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	<p>WATANABE M ET AL: "IMMUNIZATION OF SIMIAN IMMUNODEFICIENCY VIRUS-INFECTED RHESUS MONKEYS WITH SOLUBLE HUMAN CD4 ELICITS AN ANTIVIRAL RESPONSE"            PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES,            vol. 88, no. 11, 1991, pages 4616-4620,            XP001109106            1991            ISSN: 0027-8424</p> <p>---</p>		
A	<p>RIECHMANN L ET AL: "RESHAPING HUMAN ANTIBODIES FOR THERAPY"            NATURE, MACMILLAN JOURNALS LTD. LONDON, GB,            vol. 332, 24 March 1988 (1988-03-24),            pages 323-327, XP002949268            ISSN: 0028-0836</p> <p>---</p>		
A	<p>HOUGHTON A N ET AL: "MONOClonal ANTIBODIES POTENTIAL APPLICATIONS TO THE TREATMENT OF CANCER"            SEMINARS IN ONCOLOGY,            vol. 13, no. 2, 1986, pages 165-179,            XP008009975            ISSN: 0093-7754</p> <p>---</p>		TECHNICAL FIELDS SEARCHED (Int.Cl.)
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	11 November 2002	Sitch, W	
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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 01 2106

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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11-11-2002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 523949	A	20-01-1993	AU 662752 B2 AU 2279892 A CA 2111858 A1 EP 0523949 A1 FI 940144 A WO 9302190 A1 HU 69798 A2 IE 922287 A1 JP 7502882 T KR 255717 B1 NZ 243558 A US 5876961 A ZA 9205285 A	14-09-1995 23-02-1993 04-02-1993 20-01-1993 12-01-1994 04-02-1993 28-09-1995 27-01-1993 30-03-1995 01-05-2000 27-06-1994 02-03-1999 17-01-1994